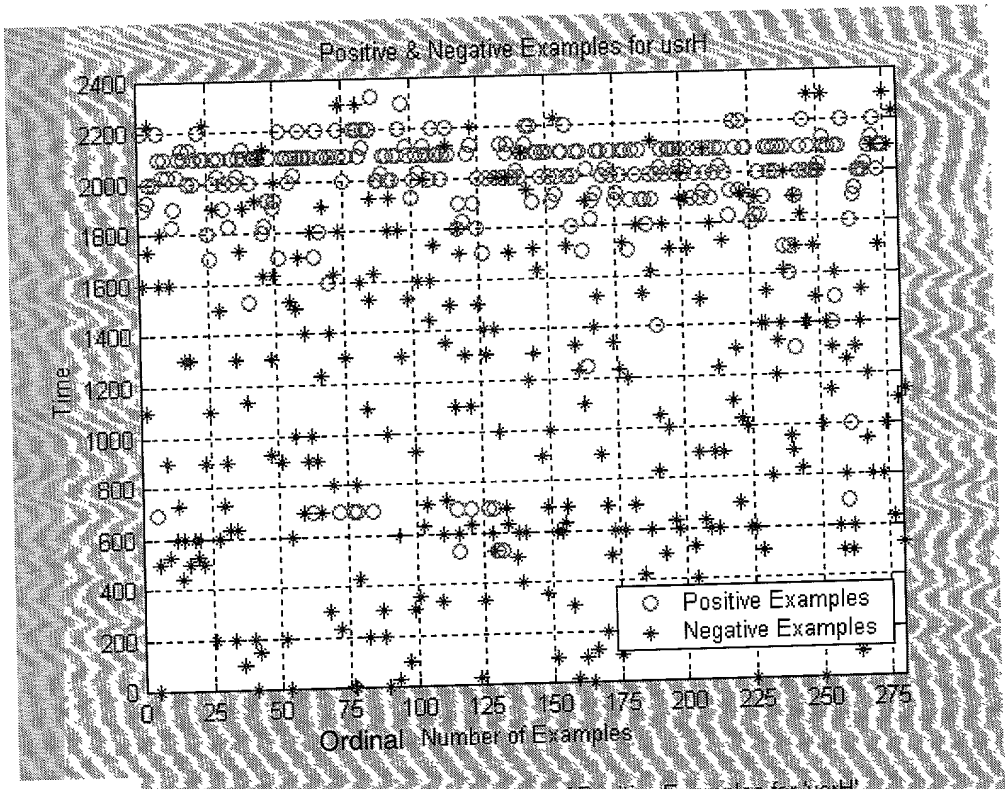
Positive & Negative Examples for usrH
Time
Ordinal Number of Examples
Positive Examples
Negative Examples
0
200
400
600
800
1000
1200
1400
1600
1800
2000
2200
2400
0
25
50
75
100
125
150
175
200
225
250
275

FIG. 1

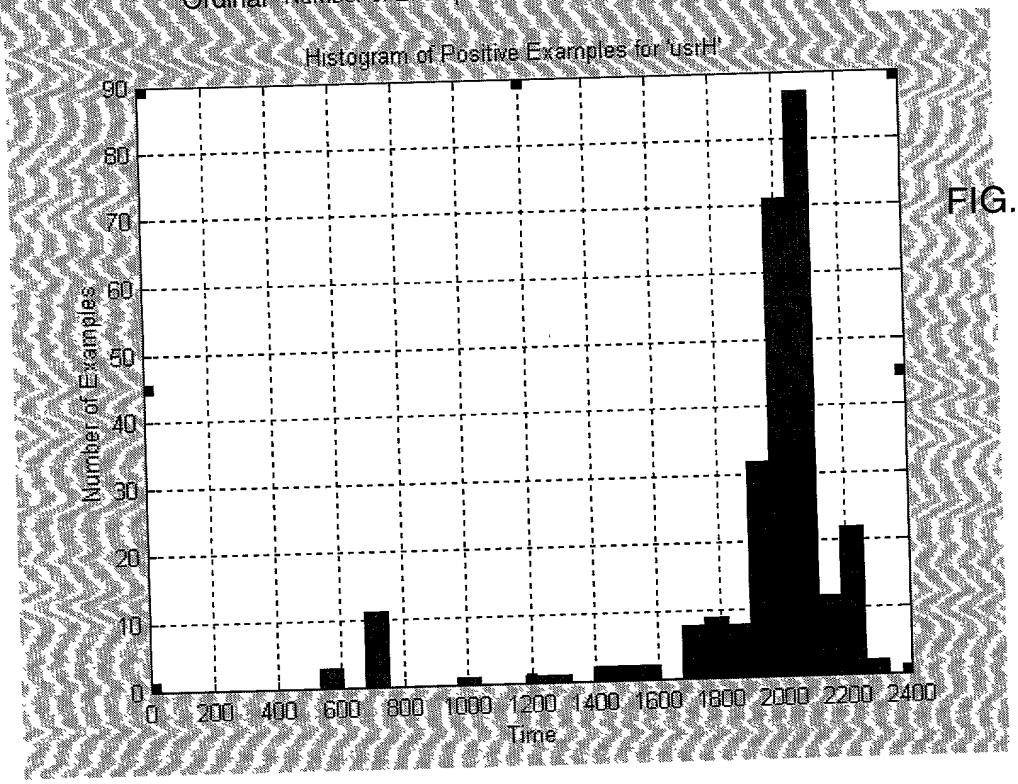
Histogram of Positive Examples for usrH
Number of Examples
Time
0
10
20
30
40
50
60
70
80
90
0
200
400
600
800
1000
1200
1400
1600
1800
2000
2200
2400

FIG. 2

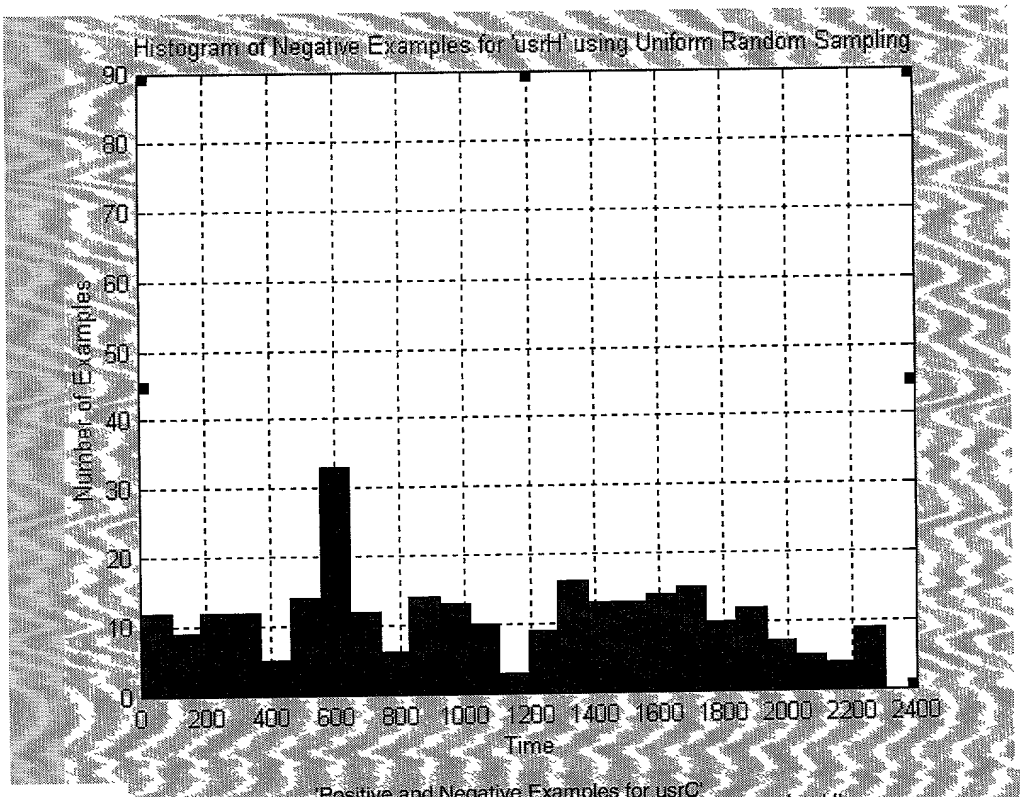
Histogram of Negative Examples for 'usrH' using Uniform Random Sampling
Number of Examples
Time
0
10
20
30
40
50
60
70
80
90
0
200
400
600
800
1000
1200
1400
1600
1800
2000
2200
2400

Fig. 3

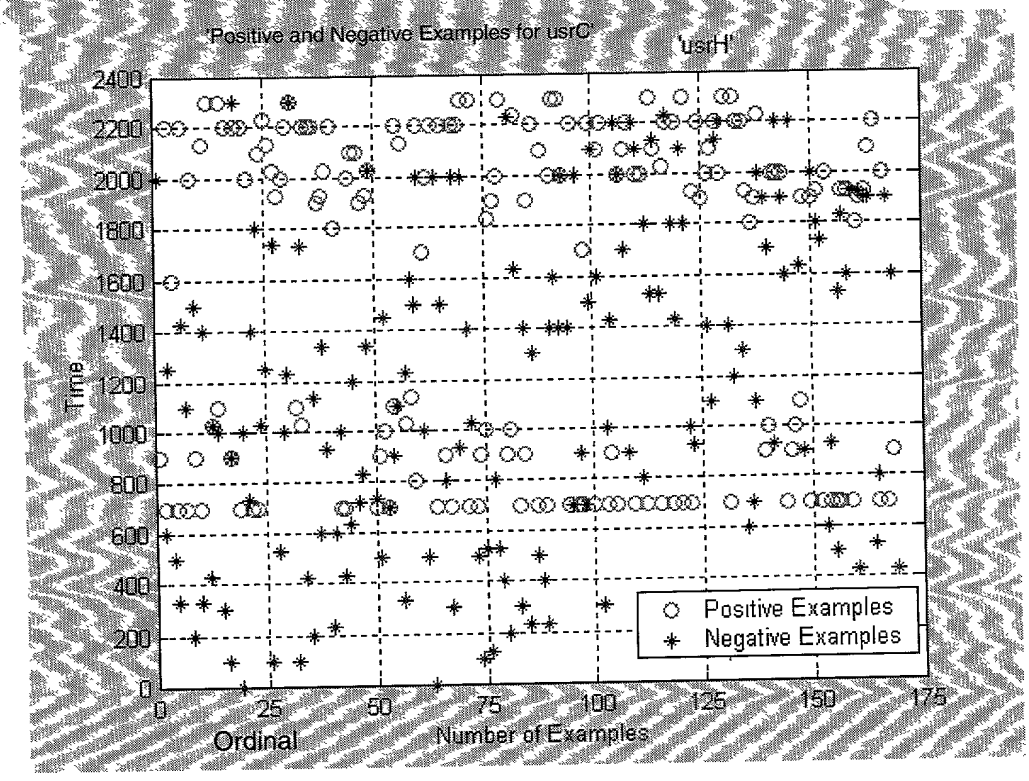
'Positive and Negative Examples for usrC' 'usrH'
Time
Ordinal
Number of Examples
Positive Examples
Negative Examples
0
200
400
600
800
1000
1200
1400
1600
1800
2000
2200
2400
0
25
50
75
100
125
150
175

Fig. 4

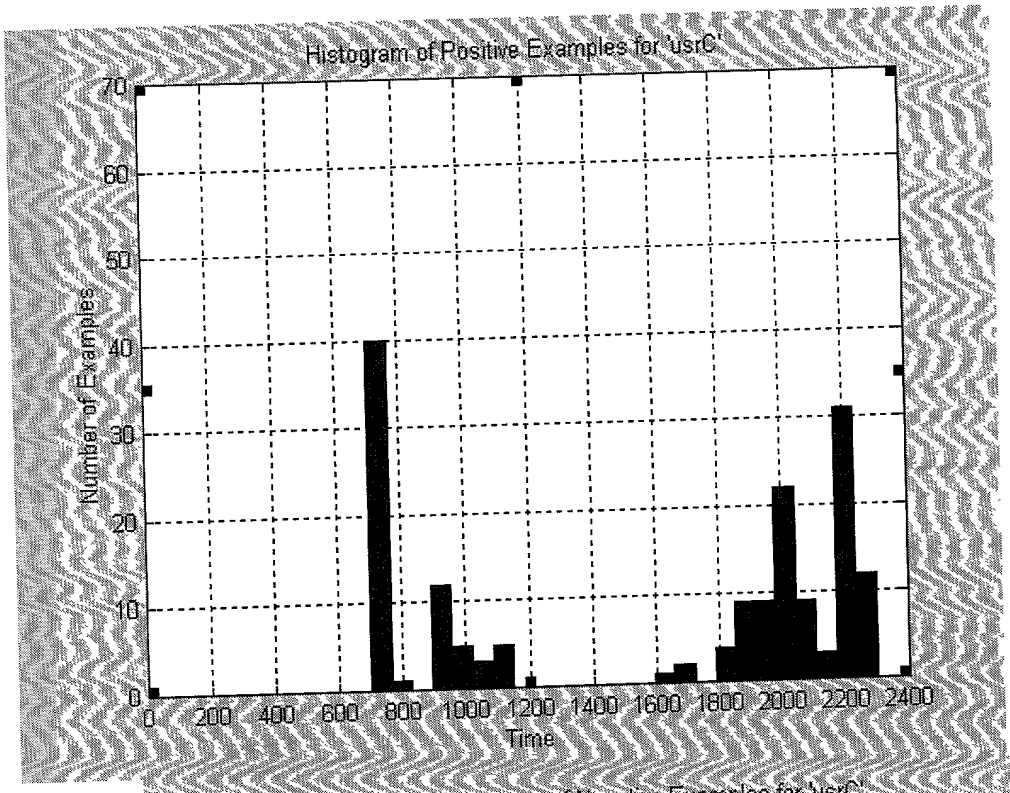
Histogram of Positive Examples for 'usrC'
Number of Examples
Time
0
10
20
30
40
50
60
70
0
200
400
600
800
1000
1200
1400
1600
1800
2000
2200
2400

FIG. 5

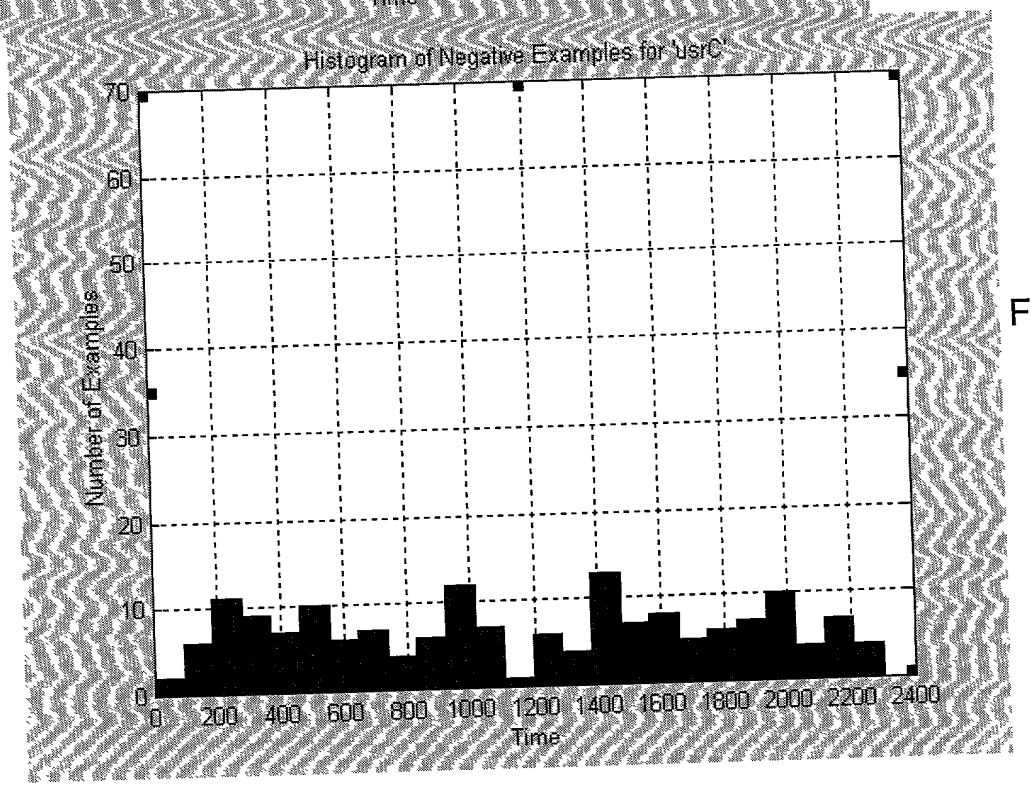
Histogram of Negative Examples for 'usrC'
Number of Examples
Time
0
10
20
30
40
50
60
70
0
200
400
600
800
1000
1200
1400
1600
1800
2000
2200
2400

FIG. 6

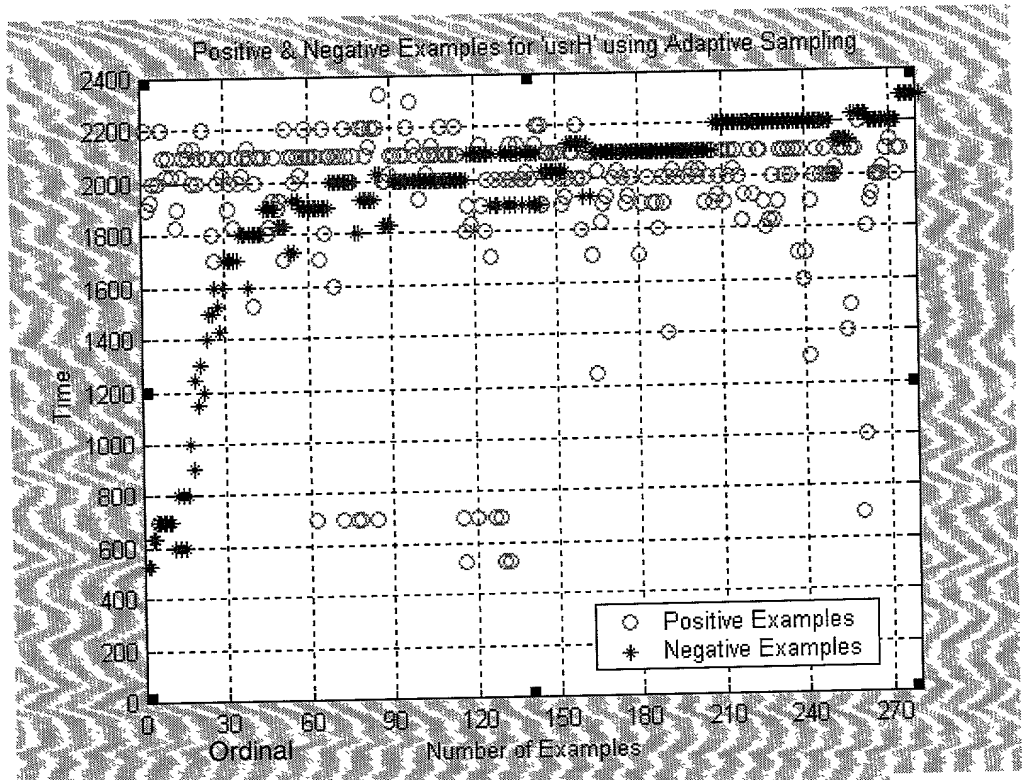
Positive & Negative Examples for 'usrH' using Adaptive Sampling
Time
Ordinal
Number of Examples
Positive Examples
Negative Examples

FIG. 7

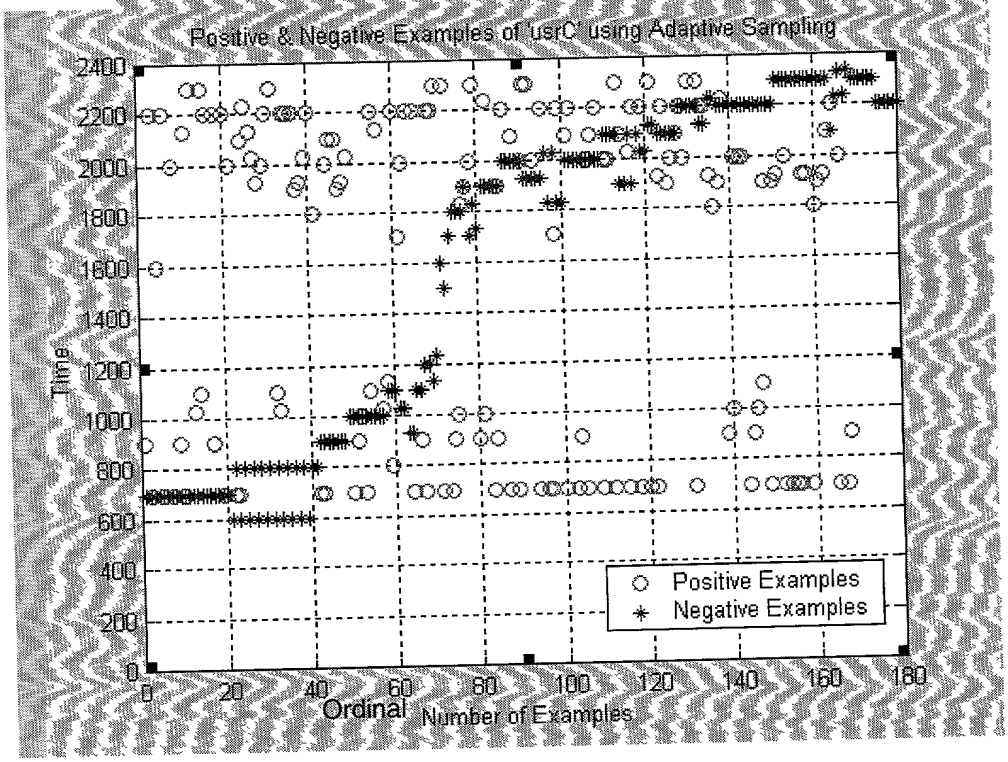
Positive & Negative Examples of 'usrC' using Adaptive Sampling
Time
Ordinal
Number of Examples
Positive Examples
Negative Examples

FIG. 8

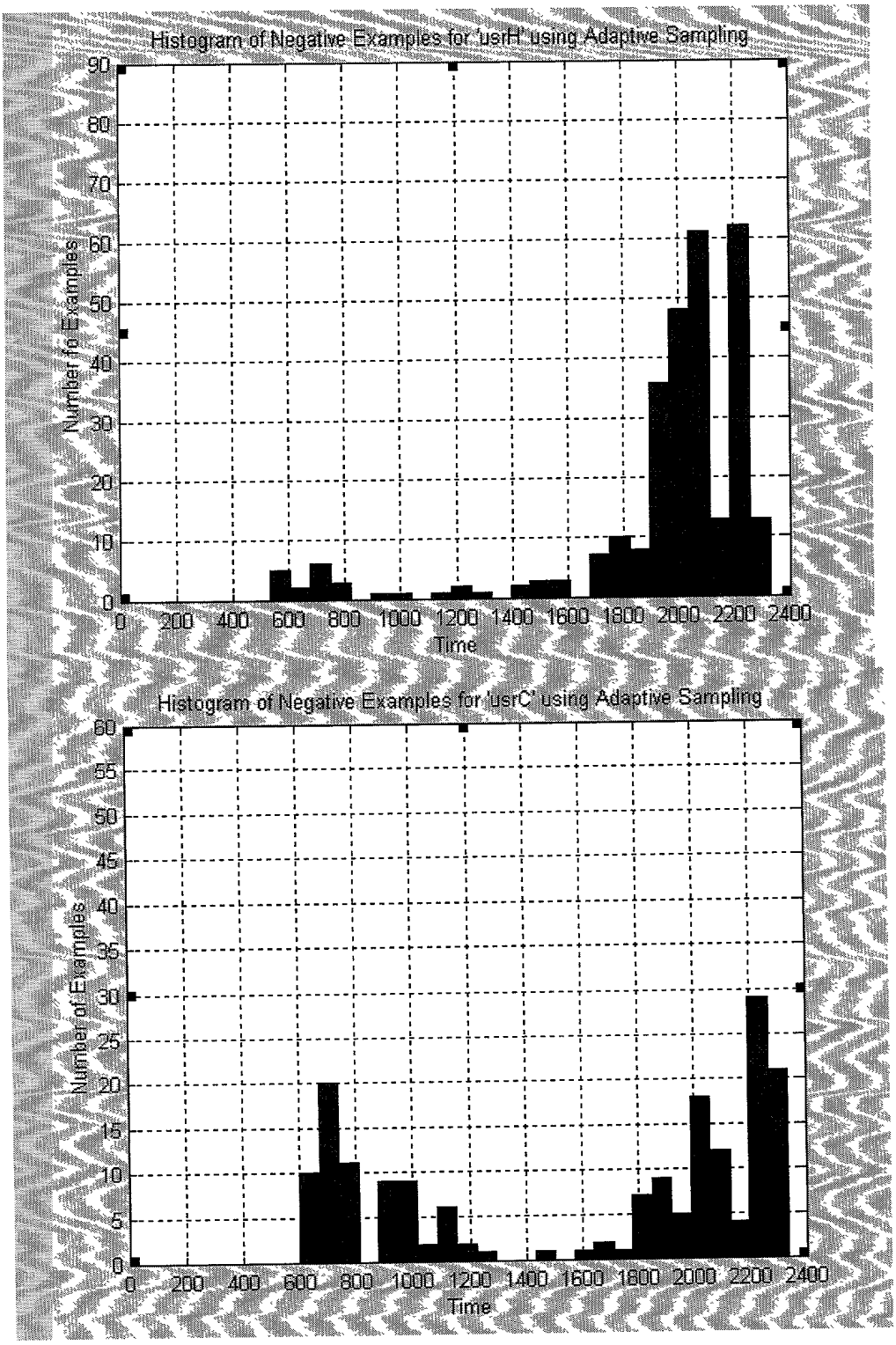
Histogram of Negative Examples for 'usrH' using Adaptive Sampling
Number of Examples
Time
0
10
20
30
40
50
60
70
80
90
0
200
400
600
800
1000
1200
1400
1600
1800
2000
2200
2400

FIG. 9

Histogram of Negative Examples for 'usrC' using Adaptive Sampling
Number of Examples
Time
0
5
10
15
20
25
30
35
40
45
50
55
60
0
200
400
600
800
1000
1200
1400
1600
1800
2000
2200
2400

FIG. 10

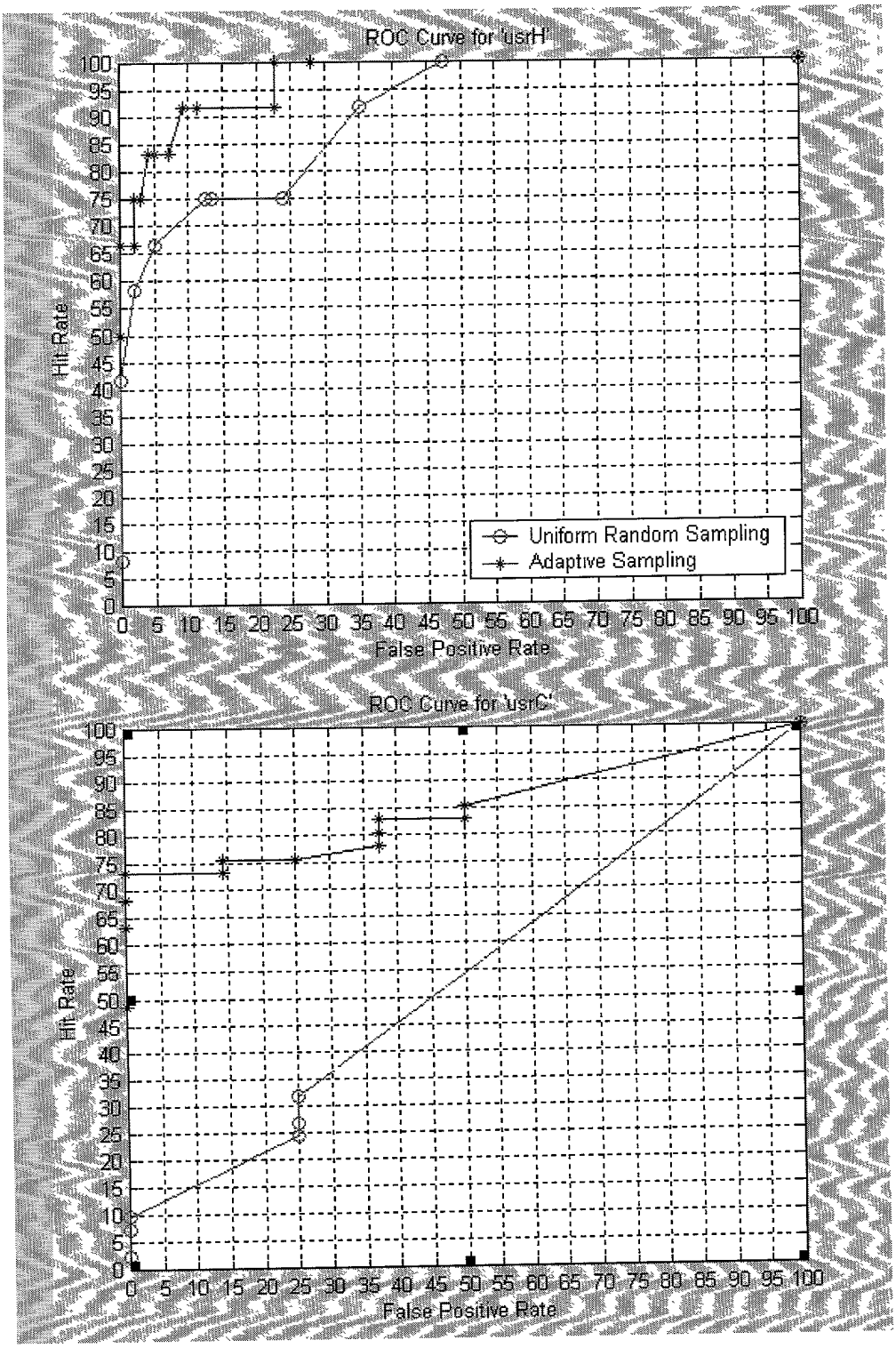
ROC Curve for 'usrH'
Hit Rate
False Positive Rate
Uniform Random Sampling
Adaptive Sampling
ROC Curve for 'usrC'
Hit Rate
False Positive Rate

FIG. 11

FIG. 12

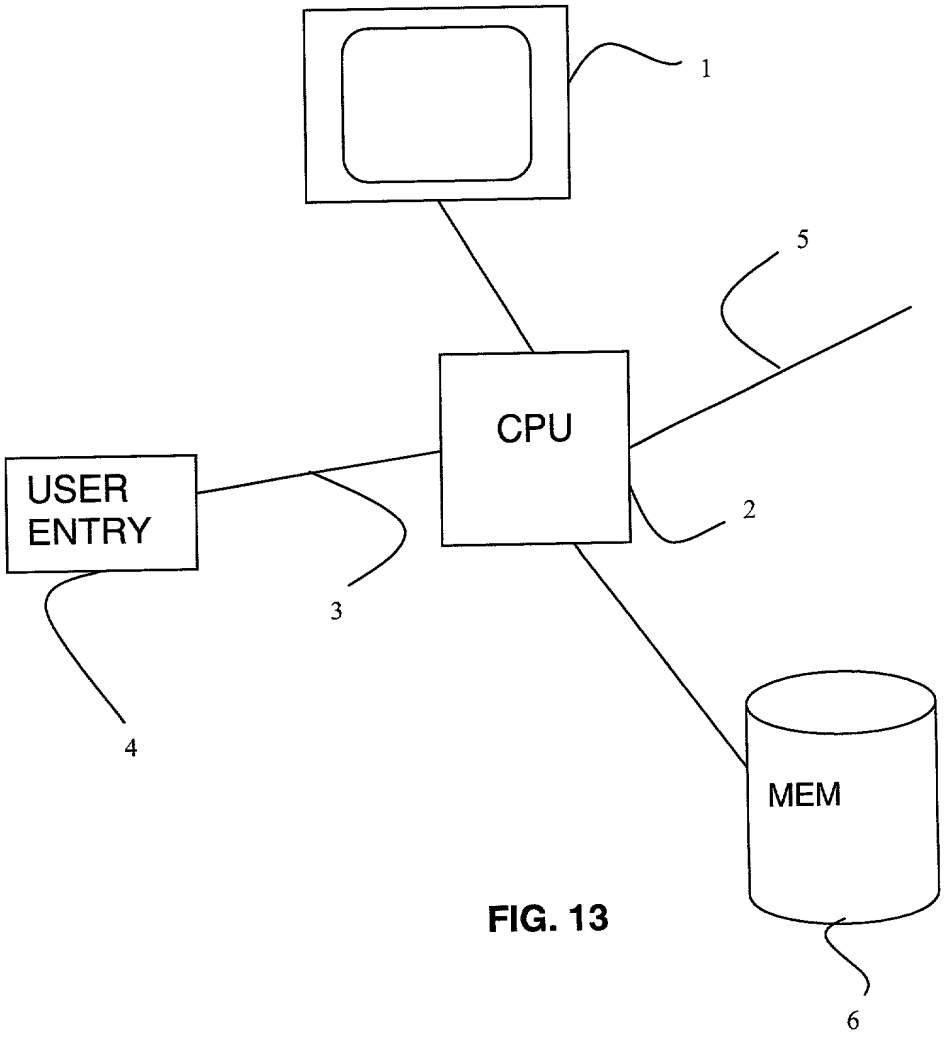

FIG. 13

FIG. 14

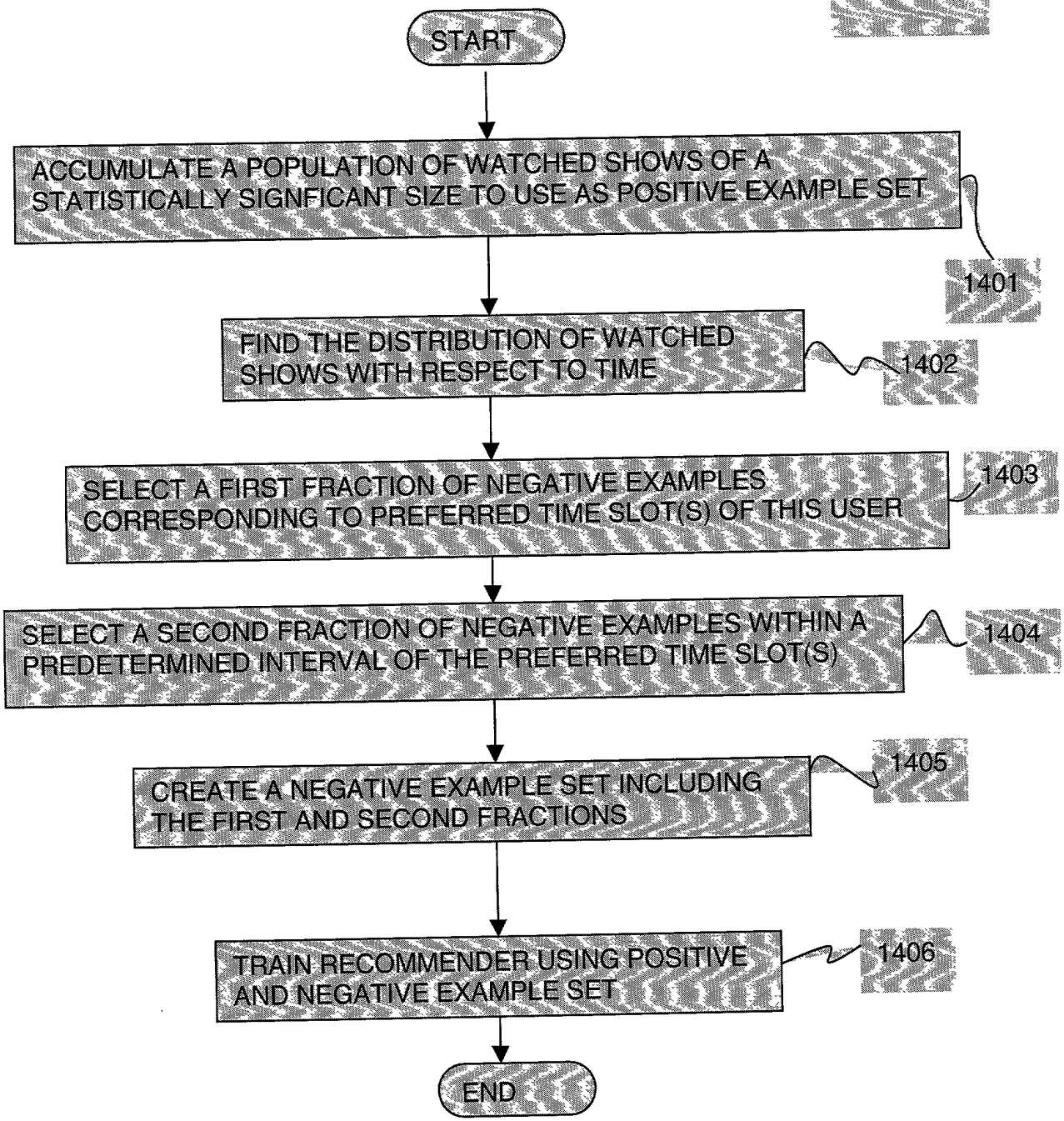
START
ACCUMULATE A POPULATION OF WATCHED SHOWS OF A STATISTICALLY SIGNFICANT SIZE TO USE AS POSITIVE EXAMPLE SET
1401
FIND THE DISTRIBUTION OF WATCHED SHOWS WITH RESPECT TO TIME
1402
SELECT A FIRST FRACTION OF NEGATIVE EXAMPLES CORRESPONDING TO PREFERRED TIME SLOT(S) OF THIS USER
1403
SELECT A SECOND FRACTION OF NEGATIVE EXAMPLES WITHIN A PREDETERMINED INTERVAL OF THE PREFERRED TIME SLOT(S)
1404
CREATE A NEGATIVE EXAMPLE SET INCLUDING THE FIRST AND SECOND FRACTIONS
1405
TRAIN RECOMMENDER USING POSITIVE AND NEGATIVE EXAMPLE SET
1406
END

FIG. 15

TABLE I

	SYSTEM PREDICTION	
ACTUAL	YES	NO
YES	TRUE POSITIVE (TP)	FALSE NEGATIVE (FN)
NO	FALSE POSITIVE (FP)	TRUE NEGATIVE (TN)

Fig. 16
TABLE 2

Threshold rate	Number of hits	Number of false negatives	Number of true rejections	Number of false positives	Hit rate	False positive rate
0.00	41	0	0	8	100.0000	100.0000
0.05	35	6	4	4	85.3706	50.0000
0.10	34	7	4	4	82.9306	50.0000
0.15	34	7	5	3	82.9306	37.5000
0.20	33	8	5	3	80.4938	37.5000
0.25	32	9	5	3	78.0524	37.5000
0.30	32	9	5	3	78.0524	37.5000
0.35	32	9	5	3	78.0524	37.5000
0.40	31	10	6	2	75.6125	25.0000
0.45	31	10	6	2	75.6125	25.0000
0.50	31	10	7	1	75.6125	14.2900
0.55	31	10	7	1	75.6125	14.2900
0.60	30	11	7	1	73.1720	14.2900
0.65	30	11	8	0	73.1720	0.0000
0.70	28	13	8	0	68.2900	0.0000
0.75	28	13	8	0	68.2900	0.0000
0.80	26	15	8	0	63.4134	0.0000
0.85	26	15	8	0	63.4134	0.0000
0.90	26	15	8	0	63.4134	0.0000
0.95	20	21	8	0	48.7866	0.0000
1.00	20	21	8	0	48.7866	0.0000